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November 20, 2002

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Ms. Marlene H. Dortch Secretary Federal Communications Commission 445 12th Street. S.W. Washington. D.C. 20554

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Re: Ex Parte Presentation in CC Docket Nos. 02-33; 95-20; 98-10; GN Docket No. 00-185; CS Docket No. 02-52

Dear Ms. Dortch:

On November 19, 2002. Richard Whin of WorldCom, Inc. and outside counsel Mark Schneider (Jenner & Block) met with Kyle Dixon, Deputy Chief of the Media Bureau and Special Counsel to the Chairman for Broadband, to discuss the issue of Internet service provider (ISP) access to DSL networks. The meeting focused largely on issues covered in previous filings submitted by WorldCom in the above-referenced proceedings, including the many legal infirmities attending the suggested redefinition of DSL services and any consequent elimination of the Computer Inquiry rules. In particular. Mr. Whitt and Mr. Schneider explained. in partial response to a recent SBC ex parte presentation, that:

- Intermodal competition for consumer broadband services is a fallacy. For example, based on figures presented by the Bell Operating Companies (BOCs). only one-third of American consumers currently can choose from between the cable and local telephone companies for broadband services. Moreover, as recent press reports show, the satellite companies are retreating from any earlier intention to deploy competing broadband platforms. At best, then, consumers currently face a limited telephone/cable duopoly, which hardly qualifies as robust intermodal competition.
- The BOCs' "level playing field" argument holds no water. for many reasons articulated in WorldCom's previous filings. In addition: (1) the FCC (rightly or wrongly) utilized historical and statutory reasons for not imposing common carriage requirements on the cable companies for the first time; (2) closed access to the cable modern platform makes it all the more critical for the Commission to leave the BOC platform open to competing ISPs; (3) the debacle created by @,Home's precipitous service shutdown in 2001 can be directly attributed to consumers' inability to access competing ISPs, which in turn can be traced to the FCC's failure to require cable open access; and (4) allowing the BOCs to serve as the sole DSL-based broadband provider, and sole DSL-based ISP, constitutes a single point of failure that raises

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serious concerns about critical infrastructure protection and risks to network security

- The BOCs already are openly flouting the existing Computer Inquiry rules and safeguards. This noncompliance is demonstrated by the fact that the BOCs' affiliated ISPs control between 85 and 90 percent of the DSL-based Internet access market. in stark contrast to their meager I to 2 percent share of the narrowband dial-up Internet access market. Elimination of the Computer Inquiry rules will only cement this discriminator) and anticompetitive outcome. to the ultimate detriment of American consumers.
- No "radical surgery" would be required to maintain and enforce the existing Computer Inquiry rules: in fact, the separation between wholesale DSL telecommunications service inputs and retail information services is required currently, and already exists technically in the BOC networks. Moreover, the Computer Inquiry rules themselves constitute an effective deregulatory regime, by limiting necessary regulation only to facilities-based common carriers, and leaving unregulated all information services, applications, and content which utilize the carriers' telecommunications services.
- Aside from general rhetoric about restricting "integration" and "network design," the BOCs continue to provide no actual evidence of any economic costs or technical constraints resulting from application of the Computer Inquiry rules. In contrast, the Information Technology Association of America (ITAA), the BroadNet Alliance, Earthlink, WorldCom. and numerous other organizations and companies have louted the many specific market benefits of those rules. and the very real harm to the public interest should they be removed.

The attached documents were utilized during the course of the meeting.

Pursuant to Section 1.206(b)(2) of the Commission's Rules. an original and one copy of this letter are being provided for inclusion in the dockets of the above-referenced proceedings.

Sincerely,

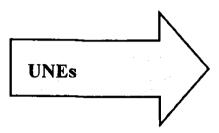
Richard S. Whitt

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cc: Kyle Dixon

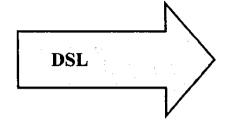
Attachments

UNEs, DSL and Internet Access



What is it:

*Network piece parts (*e.g.*, loops, transport, etc.) that CLECs use to provide telecom services.



•It is a telecommunications service that can be provided by competitive LECs using a combination of UNEs and their own facilities.

Internet Access

•An information service provided using telecommunications inputs, including network elements and telecommunications services (including **DSL)**, combined with computer processing, information storage and protocol conversion to enable users to access Internet content and services

Who gets it:

•Available only to telecommunications providers (not ISPs).

•Offered to ISPs as an input to dedicated Internet access and at retail to end-users as a private line service (*e.g.*, a **DS-I** substitute).

Provided to end-user customers.

Who offers it:

 $\ensuremath{^*\text{Offered}}$ only by incumbent **LECs.**

•Offered by telecom carriers including both incumbent **LECs** and competitive LECs.

•Offered by ISPs, including ISPs affiliated with incumbent LECs.

Regulatory treatment:

•ILECs must provide access to UNEs at cost-based rates when lack of access would impair requesting carrier's ability to provide the telecommunications service it seeks to offer.

.Regulated as a telecommunications service; ILECs are currently considered dominant in the provision of DSL.

•Internet access is not a telecommunications service regulated under Title [].



July 1,2002

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Marlene H. Dortch Secretary Federal Communications Commission 445 12th Street, S.W. Suite TW-A325 Washington, D.C. 20554

JUL - 1 2002

FEDERAL COMMUNICATIONS COMMISSION
DEFICE OF THE SECRETARY

Re: CC Docket Nos. 02-33 (Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities); 98-10; 95-20

Dear Ms. Dortch:

Pursuant to Sections 1.2 and 1.419 of the Commission's Rules (47 C.F.R. 1.2, 1.419), the BroadNet Alliance ("BroadNet") submits the attached white paper, "The Importance of a Broad Net," as its reply comments in the above-referenced proceeding. The BroadNet Alliance is a coalition of national, regional, and local independent Internet service providers (ISPs) that supports appropriate and effective regulatory oversight of the incumbent local exchange camers (ILECs) to ensure quality, affordability. and innovation through competition. BroadNet is responding to specific portions of the Commission's Notice of Proposed Rulemakinp, 17 F.C.C.R. 3019 (2002), and initial comments filed by several parties, questioning the need to continue retaining the Commission's nondiscriminatory access requirement as established in the Computer Inquiry proceeding.

The attached BroadNet white paper explains how the FCC's ISP-related policies have played, and continue to play, a pivotal role in the rise and success of the online world. The paper describes how the FCC's fundamental regulatory principles were first enunciated in the Comuuter II order of 1980, where the Commission mandated that the ILECs sell to all ISPs, on an equitable and nondiscriminatory basis, the "last mile" telecommunications connections necessary to reach their customers. The resulting early growth and incredible success of the online world -- both before and after the commercial introduction of the Internet -- is traced, and linked to the competing robust choices in services, applications, and content made available to American consumers.

Just as consumers now **are** able to connect to and utilize any ISP via the first generation of "narrowband" Internet access and services, ISPs now **seek** the **right** to serve customers for the next generation of the Internet via "broadband" connections. The BroadNet paper points out in particular that the same "equal access" rules should apply because dial-up-based (narrowband) Internet access and digital subscriber line (DSL)-based (broadband) Internet access both utilize the same local telephone facilities and

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infrastructure, and allow consumers to reach the same types of content and services from the Internet.

In its conclusion, the paper urges the FCC not to abandon its longstanding procompetitive, pro-consumer policies at such an obviously critical juncture in the evolution of the Internet and the information economy. Just as important, the FCC must begin to enforce its existing rules to protect consumers and ISPs alike from an extension of the Bell Companies' local telephone monopoly into broadband and the Internet. In BroadNet's view, the prescient right answer in 1980 is still the right answer today – open markets and consumer choice.

Pursuant to the Commission's Rules, an original and four copies of this cover letter **and** the attached white paper are being provided lo you for inclusion in the docket of the above-referenced proceeding.

Sincerely,

Maura J. Colleton Executive Director The BroadNet Alliance

cc: Chairman Michael Powell Commissioner Kathleen Abernathy Commissioner Michael Copps Commissioner Kevin Martin Marsha MacBride Kyle Dixon Matt Brill Jordan Goldstein Dan Gonzalez Dorothy Attwood Jeff Carlisle Jodie Donovan-May Diane Law Hsu Robert Pepper Scott Marcus Robert Cannon

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

THE IMPORTANCE OF A BROAD NET

THE SIGNIFICANT ROLE OF ONLINE SERVICE PROVIDERS IN THE DEVELOPMENTAND SUCCESS OF THE INFORMATION AGE

JULY 2002

A BroadNet Alliance White Paper



1211 Connecticut Avenue, N.W. Suite 608 Washington, D.C. 20036 Washington, D.C. www.broadnetalliance.org



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"FASHIONING A BROAD NET" -THE SIGNIFICANT ROLE OF ONLINE SERVICE PROVIDERS IN THE DEVELOPMENT AND SUCCESS OF THE INFORMATION AGE

INTRODUCTION

The commercial Internet, while less **than** a decade old, already has had a profound impact on the way Americans live, work, and play. At the center of this amazing success story are online service providers – including most recently Internet service providers (ISPs) – who have played a critical role in the development of the electronic world we now call the World Wide Web. These companies, and their progeny, have endeavored to continue providing tens of millions of consumers with the tailored services. applications, and content they desire. Key to their success is the enforcement of a fundamental regulatory principle, first enunciated by the Federal Communications Commission in 1980, mandating that the incumbent local exchange carriers ("ILECs") make available to ISPs, on a nondiscriminatory basis, the "last mile" telecommunications services necessary to reach their customers. This "equal access" policy in large part enabled the rise and amazing success of the online world, and the astonishing array of choices made available to all consumers throughout the United States.

This BroadNet white paper explores the deep roots **of** the online services market, beginning with the early enhanced service providers which helped pave the way for the Internet. The paper also examines how the FCC's nondiscriminatory access policy created the conditions that allowed consumers to reach the online providers of their choice. Addressing the advent of the ISP, the paper describes the rich array of services and content made available through narrowband "dial up" connections to the Internet.



As the broadband era dawns, independent ISPs seek to offer to consumers the ability to connect to, and utilize, the next-generation applications that ride on broadband transmission services. In so doing, these ISPs hope to provide much-needed competition to the retail ISP offerings provided by the ILECs and cable companies. At this critical juncture, BroadNet calls on the FCC not to retreat from its decades-long commitment to maintaining nondiscriminatory access to the telecommunications platforms that lead to the online world

THE INTERNET: YESTERDAY. AND TODAY

A. <u>In The Beginning: The Online World Before the Internet</u>

The online services market did not simply materialize out of thin air in 1995. In the 1970s, 1980s, and early 1990s, there was no commercial Internet, no World Wide Web, no use of web browsers & search engines or Instant Messaging. However, as far back as the late 1960s, small, innovative companies such as CompuServe and Prodigy were pioneering the use of interactive information content services. These enhanced service providers (ESPs) built a loyal base of customers who communicated via computer connections using FTP, Usenet, and other protocols, and utilized a vast array of applications in the process.

A simplified timeline of the thirty years between the initial rise of online services and the birth of the commercial Internet might prove helpful:

1960s

International airlines cooperate to build a packet-switching reservations network that uses leased telephone lines to connect nine international switching centers. By 1973 the volume over this network exceeds all international telegraph traffic.



- GE begins a commercial time sharing service that serves 25 US cities and sites in Canada, Mexico, Britain, the Netherlands, and France.
- Advent of ARPANET
- CompuServe begins as a time share service.
- Tymnet begins work on its commercial network to provide time sharing services.

1970s

- Bolt, Beranek, & Newman (BBN) take the lead in developing the ARPANET, the precursor to the Internet.
- FTP released by Jon Postel (1972).
- NASDAQ begins transmitting stock quotations (1971). By 1975 there are 1,700 terminals connected to this network.
- CompuServe reaches 400 business subscribers across the country (1972). Items available online include bulletin boards, databases, and games.
- Email, which already existed on time sharing computers, is added to ΛRPANet protocols (1973).
- BBN opens Telenet. the first commercial version of the **ARPANET** (provides time share services) (1974). General Motors was an early customer.
- Tymnet grows to 160 nodes and can serve 1,000 or more users simultaneously (1976).
- Apple II users use A.P.P.L.E.'s "Apple Box" to send and receive programs via the phone line by way of a cassette port.
- First USENET newsgroups established (1979).
- Release of the DC Hayes Micromodem II (1979).
- Telenet is acquired by GTE (1979).
- The Source is established (1979).
- CompuServe begins to offer online services to personal users (1979).
- Beginnings of floppy & file transfer-based services. (e.g., Commerce Business Daily listings).

1980s

- Federal Communications Commission (FCC) issues initial Computer II decision in the Computer Inquiry proceeding (1980).
- Combination of inexpensive desktop computers (PCs) and network ready servers allows corporations to join the Internet. Corporations begin to communicate with **each** other and their customers **cnline**.
- ARPANET fully converts to TCP/IP Standard (1983).
- FidoNet is created and quicklybecomes a successful BBS service (1983).
- US companies begin to offer commercial email services (MCI Mail, Sprint's Telemail, Dialcom).
- First "Free-net" created at Case Western University for the Society for **Public** Access Computing.
- Library of Congress goes online as a telnet service.



- Internet addresses begin using top level domains (tlds) such as .com, .edu, .gov, and .uk (1985)
- PeaceNet offered to participants for the cost of the telephone connection plus a nominal fee to cover operating expenses (1985).
- AOL (as Quantum) launches BBS with a graphical user interface.
- Telenet is acquired by Sprint (1986).
- The WELL, an ISP is established (1986)
- Microsoft Windows is first released (1986)
- UUNet initiates service (1987)
- Internet Relay Chat (IRC) is born (1988).

Early **1990s**

- By the end of the 1980s. systems like USENET, FidoNet, and BITNET were serving several thousands of users around the world.
- The ARPANet is decommissioned. The faster NSFNET takes its place as the Internet backbone.
- The ban on commercial traffic on the Internet backbone, NSFNET. is lifted.
- Gopher is created and released.
- First audio and video broadcasts take place **over** a portion of the Internet known as the "MBONE."
- Lynx is developed.
- Mosaic, the first graphical web browser is deployed.
- Netscape is formed.

1995

The Internet is fully privatized.

B. The Internet Today

Now in **2002**, the Internet touches nearly every aspect of daily life. This year it is estimated that there are more than half a billion Internet users worldwide, with some 200 million in the United States and Canada alone. Traffic on the World Wide Web continues to grow at a pace of 40 to 80 percent per year. A Pew Interne! survey shows that more than 50 million Americans send at least one email message per day. The popular Google search engine currently indexes more than two billion web pages, and there likely are four times that number actually on the network. In support of all that



content and traffic, there are up to **4.3** billion hosts, over 120 million servers, and hundreds of thousands of individual networks.

The **ISP** market has blossomed along with the exploding use of the Internet,

Despite the present-day financial difficulties in the dot com sector, more than 7,000 ISPs provide a whole host of services, applications, and content to tens of millions of

American consumers. These ISPs range from the largest national providers (AOL, Earthlink, MSN) to the mid-size regional providers, to the smallest mom-and-pop operation. In support of the resulting traffic, at least forty Internet backbone networks criss-cross the country, carrying many trillions of bits per second.

And yet, despite this robust array of competitive choices residing at the core and at the edge of the "network of networks," most consumers have no choice when it comes to the "last mile" connection to the Internet. For the 98 percent of consumers utilizing "dial-up" modems to connect to their favored ISP, the incumbent local exchange carrier and its ubiquitous network of copper loops essentially is the only game in town.

Fortunately, to date that critical physical and virtual link between an JSP and its customer has not been subject to the unchecked whims of an unregulated monopoly. Over twenty years ago, by an act of sheer foresight, the FCC arrived at a policy decision that guaranteed every online service provider a fair opportunity to compete over the local telephone network.



ISPs AND EQUAL ACCESS TO LOCAL TELECOM PLATFORMS

A. The FCC Plays A Maior Role

The advent of the online world, and all it **has** provided to consumers, cannot be viewed as a mere happy accident of history. Beyond the incredible efforts of thousands of brilliant and energetic minds in this nascent marketplace, a key regulatory decision by the Federal Communications Commission, and its reiteration over twenty years, has had a considerable impact on the ability of consumers to even reach the growing torrent of online services.

1. The Basic/Enhanced Distinction

The FCC's Computer Inquiry proceeding began in the mid-1960s as a revolutionary attempt by the Commission to separate out those services which should continue to be regulated as common carriage offerings under Title II of the Communications Act, from those services which utilize communications inputs in a highly competitive, and unregulated, "value-added" services marketplace. In the now-seminal Computer II order, released in 1980, the Commission classified all services offered over a telecommunications network as either "basic" or "enhanced." Put simply, "basic transmission services are traditional common carrier communications services" provided by telephone companies, and "enhanced services are not." More specifically, the Commission observed that basic service constitutes "the common carrier offering of transmission capacity for the movement of information," which involves providing a

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¹ Computer II, Final Order, 77 FCC Rcd 384 (1980), at 430 (pnra. 119)



communications path "for the analog or digital transmission of voice, data, video, etc. information." All basic services are regulated by the FCC as common carriage.

In contrast, an enhanced service must meet one of three criteria: it must (1) employ computer processing applications that act on the format, content, protocol, or similar aspects of the subscriber's transmitted information; (2) provide the subscriber additional, different, or restructured information; or (3) involve subscriber interaction with stored information. Early examples of enhanced services include audiotext, videotext, and email. In all cases, an enhanced service by definition is "offered over common carrier transmission facilities used in interstate communications;" in other words, a basic communications component underlies every enhanced service, so that an enhanced service essentially "rides" on a basic service. Because enhanced services are provided in a competitive marketplace, the FCC decided to leave them unregulated.

2. The "Equal Access" Doctrine

While the <u>Computer Inquiry</u> rules are remembered largely, if not solely, for the creation of these important definitional distinctions between regulated basic services and unregulated enhanced services, perhaps an even more critical decision followed. The FCC had recognized that because basic communications service constitutes "the building block" upon which enhanced services *are* offered, "enhanced services are dependent upon the common carrier offering of basic services..." The FCC expressed concern that AT&T would have the motive and opportunity to provide unregulated enhanced services

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² <u>Id</u>. at para. 93

³ 77 FCC Rcd at 475 (para. 231).



in a way that used its own underlying communications facilities and services in a discriminatory and anticompetitive manner.

In order to protect against the potential for carriers to discriminate and commit anticompetitive acts against other ESPs, the Commission required such carriers to unbundle and provide the underlying basic transmission services to all ESPs on a nondiscriminatory basis. The thrust of this "equal access" requirement, the Commission explained, is "to establish a structure under which common carrier transmission facilities are offered by them to all providers of enhanced services (including their own enhanced subsidiary) on an equal basis." This means that "the same transmission facilities or capacity provided the subsidiary by the parent, must be made available to all enhanced service providers under the same terms and conditions." This requirement "provides a structural constraint on the potential for abuse of the parent's market power through controlling access to and use **of** the underlying transmission facilities in a discriminatory and anticompetitive manner."

The three-part definition of "enhanced services," and the nondiscriminatory unbundling and other requirements applicable to camers were codified in section **64.702** of the FCC's **rules**. Those rules authorized all common carriers, excepting **AT&T** and GTE, to provide enhanced services directly to the public. **AT&T** and GTE **were** prohibited from providing such services unless they complied with specific requirements, including establishing separate corporations providing enhanced services, which **must** (1) obtain all transmission facilities pursuant to tariff, (2) operate independently from the

⁴ Id. at 474 (para. 229).

⁵ 47 C.F.R.Section 64.702(2001)



carrier, (3) deal with affiliated entities on an arm's length basis, and (4) reduce to writing all material transactions between the carrier and the affiliate. In addition, carriers were required (1) not to sell or promote directly any enhanced services, (2) to disclose publicly all network design and technical standards information affecting changes to the underlying telecommunications network, and (3) not to provide customer proprietary infomation to the separate corporation.⁶

3. An Unwavering Principle

Over the past twenty years, the fundamental nondiscriminator_inbundling requirement has been retained through the various Comuuter Inquiry proceedings. The FCC did clarify in subsequent orders that all nondominant camers were required to make available underlying transmission capacity on nondiscriminatory terms, while dominant carriers operating under the Computer II structural separation rules (the Bell Operating Companies (BOCs) and AT&T) were prohibited from offering basic and enhanced services together at a single bundled price.' So, even while the Commission replaced the BOCs' structural separation requirements with nonstructural safeguards, it affirmed and strengthened the requirement that the BOCs must acquire transmission capacity for their own enhanced services operations under the same tariffed terms and conditions as competitive ESPs.⁸

⁶ See 47 C.F.R. Section 64.702(b), (c).

⁷ Under the more flexible <u>Computer III</u> rules, the **BOCs** were allowed to jointly market enhanced services and telecommunications services, but they remained obligated to offer the telecommunications service component separately through the Comparably Efficient Interconnection (CEI) and Open Network Architecture (ONA) requirements.

⁸ CPE/Enhanced Services Bundling Order (2001), at para. 4



More recently, following passage of the Telecommunications Act of 1996, the FCC found that the preexisting Computer Inquiry requirements are consistent with the statute, and continue to govern BOC provision of information services.' The Commission explained that the Computer Inauiry-based rules are "the only regulatory means by which certain independent ISPs are guaranteed nondiscriminatory access to BOC local exchange services used in the provision of intraLATA information services." Continued enforcement of these safeguards is necessary, the Commission concluded, and "establishes important protections for small ISPs that are not provided elsewhere in the Act." In particular, where a BOC affiliate provides an information service bundled with its own facilities-based telecommunications services, "the affiliate would be subject to a Computer II obligation to unbundle and tariff the underlying telecommunications services used to furnish any bundled service offering." 12

Within the **last** year, the FCC has emphasized the continued retention the "fundamental provisions" contained in the <u>Computer Inquiry</u> decisions "that facilities-based carriers continue to offer the underlying transmission service on nondiscriminatory terms, and that competitive enhanced services providers should therefore continue **to** have access to this critical input." Indeed, the Commission **noted** that it sought "to ensure that competitive enhanced service providers continue to have non-discriminatory

⁹ Non-Accounting Safeguards Order, 11 FCC Rcd 21905 (1996). at para. 132. remanded on other grounds.

¹⁰ **Id.** at para. 134.

II Id.

¹² Id. at para. 136.

¹³ Id. at para. 12.



access to the underlying transmission capacity....¹⁴ In particular, the Commission stressed, "the separate availability of the transmission service is fundamental to ensuring that dominant carriers cannot discriminate against customers who do not purchase all the components of a bundle from the camers, themselves." In addition, the Commission observed that not even the BOCs themselves disputed that "all incumbent LECs are required to offer basic local exchange service on an unbundled, tariffed, nondiscriminatory basis.""

Thus, the FCC repeatedly and forcefully has acknowledged the "fundamental provisions" of the Computer Inquiry decisions that protect an ESP's ability to access a "critical input." Under the current FCC rules, BOCs that provide information services are required to offer the underlying telecommunications transmission component separately pursuant to tariff, and their own information service offerings must utilize such telecommunications services in the same nondiscriminatory manner. All other carriers owning transmission capacity and providing enhanced services must unbundle their basic from enhanced services and offer the telecommunications services to other enhanced service providers under the same terms and conditions under which they provide such services to their own enhanced service operations.

It must be stressed that equal, nondiscriminatory access does **not** constitute anything like a "free ride" on the ILECs' networks, as some have alleged. For over twenty years, ISPs have paid above-cost retail rates to the ILECs for the use of their local network. All ISPs have sought is to ensure that the rates they pay, and the services they

¹⁴ Id. at para. 39.

¹⁵ Id. at para. 44



receive, are not any different than that obtained by any other ISP – and in particular the ILECs' own ISPs. Unless an **ILEC** violates the Communications Act by failing to assess any telecommunications-related charges on its own ISP, an equitable ride is not a free one,

B. Online Services **Before the** Internet

Against the backdrop of the Computer Inquiry regulatory structure that has been in place since 1980, it is instructive to briefly review the initiation, growth, and ultimate widespread success of a robust and feature-rich information services marketplace. One can reasonably conclude that much of the success, if not the existence, of this market has its very roots in the FCC's far-reaching Computer Inquiry precedent.

Many service providers were in existence and flourishing long before the Internet was made available for commercial pursuits. These early providers utilized the local telecommunications networks to reach and interact with their customers – just as ISPs do today. The types of pre-Internet online services and service providers are listed briefly below.

I. **Early Types of Services**

Remote Access Data Processing Services (Time Share Services)

Time Share services allow users to dial into more advanced data processors (data processors were scarce and expensive at the time). Time Share services relied on **regulated** telephone services for transport. Time Sharing Services can be traced back to the late 60s.

Audiotent Services

These include services such as interactive phone menus and voice mail.

Videotext Services/Online Interactive Data Services



These services send information (news, stock quotes, etc.) from computer databases over telephone lines to subscribers' terminals. personal computers, or teleprinters. Government-owned telephone companies developed the first videotext systems in Europe in the 1970s. Videotext systems delivered information and transactional services such as banking and shopping. These systems differed from broadcast media delivery systems due to the special qualities of interactivity engendered by the technology which allowed the user to personalize his media use rather than act as a passive member of an aggregate audience.

Services provided by videotext fall into one of three areas: (1) information retrieval services such **as** obtaining stock prices or weather forecasts; (2) transactional message services which enable the purchasing of merchandise over the network; and (3) interpersonal message exchanges which may include conferencing, chat channels, or electronic mail.

Although users connected to early videotext systems on dedicated terminals, most online services were soon accessed by **the** user via a phone line and a personal computer equipped with a modem or Ethernet connection. Videotext users typically paid a per-use charge or a monthly subscription fee to access the service.

In the United States, videotext systems were initially launched by the newspaper publishers who provided news and advertisements through special terminals hooked up to television monitors. Although most of these services met with little commercial success, the increased diffusion of personal computers into the home eventually enabled consumer oriented videotext systems to succeed in the mass marketplace. By the mid-1990s, more than four million households had subscribed to one or more of the largest consumer-oriented U.S. videotext systems: America-Online, Prodigy, CompuServe, and Genie.

Bulletin Board Systems

In the late seventies, computer users began to create small information systems that could be accessed over the phone lines. These "bulletin board systems" consisted of a single computer that was always waiting to answer the phone. When it rang, the computer would answer the phone and establish two-way communication via the modem. A program running on this computer would then allow the calling computer to do various things, such as reading messages left by other users, or posting messages for others to read. As the BBSs became more sophisticated, it was possible to send and receive programs or other data files via modem, play games, or participate in online surveys. The bulletin board operator was responsible for maintaining the software and the message databases, often leaving his computer on for 24 hours a day to be available for callers.



• Airplane Reservation Services

In the early 1960s, American Airlines and IBM created the SABRE online reservation system. *An* international system soon was built, and in 1965 the Societe Internationale de Telecommunications Aeronautiques (SITA), decided to build a new packet-switching network that would use leased telephone lines to connect nine switching centers in Amsterdam, Brussels, Frankfort, Hong Kong, London, Madrid, New York, Pans, and Rome

• Online Database Searching (Libraries, Business, News)

Examples of these services included Lexis, Dow Jones News/Retrieval Service, Dialog, News Corp.'s Delphi, Dial Data, BIX, and Microsoft Network.

• Electronic Data Interexchange (EDI)

EDI involved the electronic exchange of trade-related documents

■ Point of Sale (POS) transactions

POS transactions facilitated credit card purchases by connecting swipe machines connected **to** large databases over the phone lines.

• Electronic Mail

E-mail began as a service provided only between users on a particular network (i.e., CompuServe users could send messages to other CompuServe users). It then expanded to include Internet mail. **MCI** Mail was one of the first commercial services offered.

Usenet News Groups

Usenet began at Duke University and was a system for distributing online forums, called "newsgroups," among computers running the UNIX operating system.

■ Internet Protocols

Early Internet-like protocols developed before the World Wide Web and graphical browsers include: Telnet, File Transfer (FTP), Gopher, WAIS, Internet Relay Chat (IRC), and Multi-User Dungeon (MUD).



2. Early Providers

■ Tymnet and Telenet

As a precursor to interactive online services, Time Share services provided remote access to data processing services using a modem and the phone network. Early providers of Time Sharing services included Tymnet & Telenet. The companies' nodes acted as computer gateways to other online computer services across the country. Users paid a fee for using the Tymnet or node, and an additional fee for the specific service they accessed. Telenet later became SprintNet. By the mid-1970s, a number of commercial entities began to see the potential of providing data communications services independently of time-sharing services.

■ The Source

The Source began in 1979 and lasted until 1989. For much of its life, it was owned by Reader's Digest. It was accessible through Telenet or Tymnet nodes. The Source had many services available online, including over twenty financial and business services, access to several national and international news services, and computer-specific news features. *An* online encyclopedia, shopping, interactive games, and airline reservations were also available. Access to the Source required a \$10 monthly minimum charge, long after other national online services had either eliminated or significantly lowered such charges. CompuServe bought out the Source, and its subscribers merged with that service in 1989.

CompuServe

CompuServe is the longest continually operating ISP in the online services business. Founded in 1969 as a computer time-sharing service, CompuServe drove the initial emergence of *the* online service industry. In 1979, CompuServe became *the* first service lo offer electronic mail capabilities and technical support to personal computer users. CompuServe broke new ground in 1980 as the first online service to offer real-time chat with its CB Simulator. By 1982, the company had formed its Network Services Division to provide wide-area networking capabilities to corporate clients. Early CompuServe services included a Hollywood Hotline and an Airline Reservation Service cosponsored by several airlines.

Prodigy

Prodigy was founded in 1984, as the first consumer online service (ISP). Prodigy was also the first consumer online service to offer World Wide Web access, and the first to offer its members the ability to publish personal World Wide Web pages.

AOL



Founded in 1985, AOL initially offered limited online services for what was then a miniscule market of personal-computer users. A timeline of highlights from AOL's beginning years includes:

May 1985: Date of incorporation under original founding name, Quantum

Computer Services

Nov. 1985: Quantum's first online service, "Q-Link," launched on Commodore

Business Machines

Aug. 1988: Quantum's "PC-Link" launched through joint venture with Tandy

Corporation

Oct. 1989: AOL service launched for Macintosh and Apple II

June 1990: Quantum's "Promenade" service launched for IBM PS/1

Feb. 1991: DOS version of AOL launched

Oct. 1991: Quantum Computer Services changes its name to America Online, Inc.

Genie

Genie, owned and operated by General Electric, began in 1985. Like other consumeroriented online providers, Genie offered many different services to its subscribers -including news, **an** online encyclopedia, online shopping, *games*, financial information, and areas of interest to **users** of various brands of computers.

AT&T

An early skeptic of packet-switching, AT&T did eventually join the online commercial service business, with AT&T Infomaster.

C. And Now, the Internet -Brought to You by 7,000 ISPs

The entrepreneurial vision and innovations that created the early online services market, and later enabled the commercial Internet and World Wide Web, succeeded in large part because the telecommunications services on which the Internet applications ride were made transparent by federal regulation. In particular, in the wake of adoption of the FCC's Computer Inquiry rules (see Section A above), the LECs were not allowed to constrain who provided Internet services, or how they were provided. As a result, tremendous innovation and investment took place at the edge of the network, free from both government and monopoly control.



Beginning in the mid-1990s, independent online service providers such as AOL, Earthlink, CompuServe, Prodigy, MSN, and literally thousands of smaller firms facilitated the initial mass deployment of Internet services by giving consumers access to Internel-based content over narrowband "dial-up" telephone connections. Many of these providers began as content-based systems: users dialed into CompuServe, for example, and received content created by or affiliated with CompuServe. In the mid-1990s, these proprietary information services were still "the undisputed rulers of the on-line world, offering a mix of news, entertainment services, chat rooms and forums" on a variety of subjects. "At the time, the Internet was still in its infancy as a consumer medium. Most people considered it too forbiddingly technical to attract a mass audience." The Internet was still mainly textual based, while the private providers offered graphical interfaces."

As consumers began to seek access to all of the information available online, these providers started to establish access to unaffiliated content on the Internet, while still providing their own proprietary content. As one analyst put it in 1995: "All online services are incorporating the World Wide Web into their strategy. If they don't, they could have a limited future because the Web is where the greatest amount of new content is being created." The key is that these companies — now dubbed "Internet service providers" — successfully responded to changing consumer demand in a highly-competitive market.

Modem-day ISPs continue to provide enormous **value** to their customers. The **ISP** function typically includes arranging for consumer access **to** the Internet through

[&]quot;Ross Laver, High-Tech Dinosaurs?, MACLEAN'S, Nov. 11, 1996, at SO.

¹⁸ Jiri Weiss, "Online Services Take lhe Web for a Spin", <u>PC WORLD</u>, Nov. 1995, at 54 (quoting Karen Burka of SIMBA Information).



local telecommunications links. The ISP directly bills consumers for the connection, and provides various customer support functions. The ISP may also provide a rich array of content and services, such as: customized web pages, web hosting, e-mail server provision, e-mail roaming, IP addresses (static or dynamic), access to domain name search and registration, browser and search engines, anti-spam software tools, Instant Messaging, streaming audio and video feeds, public radio station broadcasts, community bulletin boards and other local content, and technical seminars and workshops. These critical functions are being provided to consumers in a highly competitive narrowband ISP market.

Although the industry is experiencing consolidation, and considerable chum, due to the recent economic downturn, there still are thousands of ISPs providing consumers with a wide variety of choices. Those choices largely would be unavailable in the absence of a fundamental requirement that consumers utilizing the telephone network have the right freely to select and utilize the ISP of their choice.

There are currently many different ways to obtain Internet service, from the barest-bone to the highly advanced. Consumers and businesses require this kind of diversity to satisfy both their pricing and service needs. In short, there is a compelling public interest in accommodating many online providers.

ISPs and their services can be parsed in a variety of ways. A few are outlined below.



1. CUSTOMERS

ISP customers can include residential subscribers, small-to-large business **users** or other ISPs. Some ISPs provide service to all categories, **while** others target a certain sector, such as "business" or "residential"

Business Class

Ex.: WorldCom, Genuity, Cable & Wireless

Consumer/Residential

National Providers

Usually provide their own content Usually provide multiple & advanced service offerings Ex.: AOL, MSN, Earthlink, NetZero, Juno

o Regional/Local Providers

Offer local content (Hoonah.net at www.hoonah.net). Offer a lower price by not providing so many bells & whistles (basic Internet connectivity)

Ex.: Leapfrog Internet
http://www.leaufropinet.com/choosing%20an%20ISP.htm

"We are differentiated from other ISPs in that we provide good value for an excellent product without the extra stuff you do not want nor need."

2. CONNECTION SERVICES

The average ISP provides dial-up access, full and fractional T1 connections, and ISDN services. Many small local providers only supply dial-up services to the residential market, while the larger providers offer broadband & dedicated access to large business customers and the smaller ISPs.

- Dial-Up (ISDN, 33.6, 28.8, 56K)
 - o Ex.: A Cute Internet Service (http://acuteinternet.com)
- Dedicated Access (TI, T3, Frame Relay, FracT3, DSL, ATM)
- Broadband (DSL, Cable, Fixed Wireless, Satellite)



3. SERVICE OFFERINGS

As ISP services evolve, most providers are now offering webhosting, security, & filtering services, along with the traditional email, & newsgroup services. A sampling of the diversity of services offered includes:

- Email Webmail/pop/imap (email access from any computer)
- Web Site Hosting
- Domain Name Registration
- Technical Support
- News/Newsgroups
- Web-based Remote Access
- Virtual Private Networks (VPNs)
- VoIP (Voice over IP)
- Security (VPN, Secure Server, Firewalls, Authentication)
- Static P Addresses
- Filtering (Spam, Advertising, Adult Content, Unsecure Sites)
- Service Level Agreements (ISPs agree to provide a certain level of service;
 assigns customer priority)
- Scalability (a range of capacities with varying configurations of virtual ports; allows bandwidth to be allotted based on need)
- Dynamic Provisioning (allows users to change a service package or user profile "on the fly" without forcing the user to disconnect.)

4. PRICING

The variety of services offered allows for a large price range among service providers. Some offer a flat fee for bundled services, while others charge for each service selected. Still other **ISPs** base their fees on connection times or bandwidth, or provide special rates for certain subscriber groups.

Other pricing approaches:

- Prepaid and budgeted connectivity Allows ISPs **lo** automatically deduct or credit minutes **from** connection-time balances as users **surf** the **web.**
- Promotional Connectivity Provides free connectivity for a pre-defined period and then redirects users to a registration site for continued Internet service. As a result, ISPs can promote their services and attract new paying customers.



- Service Wholesaling allows ISPs to resell bundled, advanced, or differentiated services to smaller ISPs who then can offer these to end-users.
- Differentiated Content Enables ISPs to provide specialized content to different user groups or "clubs" for additional fees. For example, users can pay for access to interactive content such as online gaming or unidirectional information such as high-end financial services.
- Service Priority or Demand Dynamically allocates improved class of service or increased bandwidth when requested by subscribers.
- Examples of Pricing Range
 - o AllVantage http://www.allvantage.com/ \$5.95/month, "self-service" ISP concept;
 - o VerizonOnline DSL http://www.verizon.net/pands/dsl/packages/package2.asp \$59.95/month.

5. CONTENT/STRUCTURE/CONTROL

ISPs use other approaches to differentiate themselves from competitors and to increase brand recognition, customer relationships, and site traffic. As technological advances increase the ability to fashion and even manipulate a user's Internet experience, it becomes even more important for users to have a choice in the ISP market. Common approaches include:

- "Pure Internet" ISPs (Earthlink "customized by you, for you") provide a direct pass through to the Internet. Allow the user to define their Internet experience without extraneous content. Provide simple services such as connection & service support.
- Value-Added Approach (AOL) ISP creates and aggregates exclusive and nonexclusive content, features (e.g., parental controls) and functionality (e.g., Instant Messaging) for subscribers. ISPs can define and provide environments for specific users and user groups. This approach creates new commercial service opportunities by promoting access to particular sites.
- Subscriber Redirection **I** packets **can** be manipulated to redirect subscribers to selected sites or portals. This feature enables increased traffic to specific sites and personalized communications **with** individual users.
- Sticky Site redirects users to specific sites, such as the ISP's portal, according to pre-defined rules. Site "stickiness" can be increased by allowing users to view a



service announcement, register or pay for a new service, or receive a promotional gift.

- Sponsored E-commerce ISP encourages subscribers to visit e-commerce portals and sites by offering sponsored end-user access or other promotional benefits. As a result, ISPs increase their revenues **from** the growing e-commerce market.
- User Service Profiles ISP tracks subscriber use to determine what services/products they may be interested in.

TARGETED/SUBJECT FOCUSED ISPS OR SERVICE PACKAGES 6.

Some ISPs design and offer customized service packages to meet user needs and preferences using filtering techniques and other technical tools. Other ISPs only provide service to specific groups. Targeted areas include:

- Children (School or Family) (AOL, FamilyClick) (information on familyfriendly ISPs available at http://www.larrysworld.com/articles/lat_familyisp.htm)
- Foreign Languages such as:
 - o NetNam (Vietnamese) http://home.netnam.vn/
 - o Nerim (French) http://www.nenm.neV
 - o Full list available at http://thelist.internet.com/countrycode.html
- Gamers (Games ISP http://www.gamesisp.com/faq.html)
- Telecommuters such as:
 - o Vista http://www.vbbn.com/ -- "Vista is mainly targeting telecommuters, home offices and technically advanced families." http://www.ispplanet.com/fixed_wireless/business/2002/vista.html
- **Advanced Security**
- Surfers (http://www.asurfer.com/news.html)

7. CONSUMER CHOICE: SOME KEY DIFFERENTIATORS

Viewed through the eyes of the typical consumer, a rich array of choices exsist the narrowband ISP space. Consumers now are free to ask a series of questions that enable them to differentiate one ISP from another. Some of those questions include:



a. Rates

- Is there a setup fee for the account?
- Does the ISP provide flat-rate accounts? How many hours per week or month are included?
- Does the ISP offer metered accounts?
- Does the ISP charge extra for usage during peak times?

b. Phone Lines

- Does the ISP provide dial-up numbers in the local area?
- Do the dial-up numbers in the local area support the modem speed?
- What is the ratio of subscribers to modems? How long does it **take** to connect during peak times of the day? If the lines become busy too often, will the ISP stop signing **up** new accounts until new modems **are** added to the lines?
- Does the ISP regularly update its equipment?
- Are all modems in the ISP's pool 56K, or are some older modems still in service? ls the ISP V.90 standard? (an ITU modern standard for **56K** moderns).
- Docs the ISP provide an alternate line in the local area to **use** if there is a problem? Are there local dial-up numbers for other area codes? Does the ISP provide an 800 number to connect?

c. Types of Services

- Dynamic v. Static IP Addresses How much more does a static IP address cost? Dynamic IP addresses are typically harder to use with a computer's Internet software. Static IP addresses are important for remote workers who need access through corporate firewalls and for subscribers registering their own domain names.
- Does the ISP provide domain name service? How much do they charge for this
- Does the ISP provide space for a Web page to users? **Is** there an added cost? How much storage space is provided? Does the ISP offer FTP services? (FTP allows one to update and maintain a website; can also be useful for uploading and downloading files that are too big for e-mail, such as digital photos.)

d. Software

- Does the ISP provide software for connecting? Is the software **an** additional cost?
- Does the ISP provide software **for** all **types** of computers and operating systems? Is the software easy to configure? Does the ISP provide service support for **installing** the software?
- Can the same software be used to dial into different ISPs? Does the ISP have proprietary software for Internet use? Does the **ISP** force the use of one browser. such as Internet Explorer?



- How difficult is it to obtain the software from the ISP? Does it mail it to you or do you have to download it?
- Can the software be used to provide or support Application Service Provider (**ASP**) services?

e. Service

- What are the ISP's technical support hours? Do they provide technical support during evenings and weekends? Does the ISP provide a toll-free technical support number? How difficult is it to get through to technical support? What is the average waiting time?
- Will the ISP give technical support via e-mail, or only via phone? How fast is the response time?
- How large is the ISP's technical support staff7 Does the ISP provide online help pages? Are they helpful or too technical?

f. Reliability and Quality

- Does the ISP go down often? **How** long does it take to restore service?
- Does the ISP have a backup system that guarantees service? Will the **ISP** accept large mail messages **or** are messages truncated at a certain length?
- Does the ISP offer newsgroups?
- What is the **ISP's** connection to the Internet? Is there a lag when connecting?
- Does the ISP use multiple redundant connections to protect against connection failures? Does it channel **all** traffic through one pipe?

g. Special Issues

- Does the ISP provide filtering (child-proofing for unacceptable sites)?
- Does the ISP offer secure service for online transactions? What other ecommerce options are available?
- Does the ISP offer special services not available **from** other ISPs? *Are* these services optional so that they are not needlessly included in the **rate** agreement?
- Does the ISP provide personal information to mailing lists or commercial agencies?
- Does the provider offer Web e-mail?
- Does the ISP provide Service Level Agreements?
- What type of security does the ISP support for always-on (ISDN or DSL) connections?

The incredible diversity in service providers, and the numerous offerings of tailored content, applications, and services, gives the consumer an ability to create a unique interactive experience based solely on his or her personal choice.



D. <u>Big Trouble in the Broadband World</u>

Over the past few years. **the** BOCs have begun to deploy Digital Subscriber Line (DSL) capabilities in their local loop infrastructure. DSL originally was utilized by the ILECs in the late 1980s to provision copper loop-based "T-1" services to other carriers and large companies. With the emergence of competitive DSL carriers such as Covad. Northpoint, and Rhythms, and the advent of cable modem service provided by cable companies, however, the BOCs eventually realized that DSL could be used as a lower-cost broadband transmission technology for consumer and business use. Today, the BOCs and their fellow ILECs already have deployed ADSL-based Internet access service to over 70 percent of the public.

Broadband technology offers enormous potential to allow ISPs to speed the delivery of enhanced applications, content, and services to tens of millions of residential customers across the country. However, despite some claims to the contrary, the introduction of broadband technology into existing ILEC networks does not in any way entail the build-out of an entirely new network, or somehow alter the fundamental nature of the underlying telecommunications transport platform. In fact, dial-up (narrowband) Internet access and DSL-based (broadband) Internet access utilize the same local telephone facilities and infrastructure, and allow consumers to reach the same types of content and services from the Internet. The fact that affiliated and unaffiliated ISPs provide high-speed Internet access, utilizing underlying telecommunications services provided by the BOC, should not be surprising. This is precisely the case on the narrowband side, where BOCs provide the dial-up connections that ISPs combine with



information services and offer to consumers as Internet access. The very same analysis applies to Internet access provided over DSL transport lines. In both cases, the ILEC controls the "last mile" facilities needed to reach the end user.

Despite !he pro-competitive provisions of the Telecommunications Act of 1996, the vast majority of DSL lines in this country are now provided by the Bell Operating Companies and other incumbent LECs. According to the FCC's most recent Section 706 report, as of June 30,2001, the ILECs controlled 93 percent of all ADSL lines, compared to only 7 percent for competitive LECs. ¹⁹ Moreover, CLECs actually lost DSL customers in the first half of 2001. while the ILECs' DSL customer base continued to grow rapidly." These figures are hardly surprising, given the fact that most of the ILECs' erstwhile DSL-based CLEC rivals have been forced to leave the business or substantially reduce the scope of their networks.

Even more disturbing than the lack of competition for the wholesale DSL inputs, however, is the growing BOC dominance in the retail market for DSL-based Internet access. For example, SBC recently boasted that 80 percent of its total DSL lines are signed **up** to its own **ISP**.²¹ Other industry sources put the BOCs' share of the DSL-based Internet access market **even higher**.²² **In** sharp contrast, **the** BOCs today have only a

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In re Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, 17 F.C.C.R. 2844 (2002), at Table 5 ('Third706 Report"). See also Jim Thompson, Willisps Be Trampled in Dance of DSL Titans?," ISP-Planet (Z000), available at http://www.clec-planet.com/business/augisp.htm (last viewed Feb. 28, 2002) (ILECs control 80 percent of the DSL market).

Section 706 Third Report at pars. 51n.110.

Eric Krapf, "The Coming DSL Debacle." <u>Business Communications Review</u> (June 2001) at **6.**Suc Ashdown, "Can America Compete with Bell Lobbying Armies." <u>Internet Industry Magazine</u>, Fall 2001, at **74-75** (estimating the **BOCs'** share of the DSL-based Internet access market as between **78 and** 87 percent).



minimal percentage of narrowband ISP customers,²³ which can be attributable largely to the success of the FCC's Computer Inquiry policies in the dial-up access world. This striking disparity between the BOCs' small share of the dial-up ISP market, and their overwhelming share of the DSL-based broadband ISP market, clearly demonstrates that the BOCs retain monopoly control over bottleneck broadband transmission facilities, and have begun to leverage their control over those DSL-based inputs as a means of dominating the high-speed Internet access market.

This troubling situation has only been exacerbated by the fact that the FCC has failed to back up its own existing nondiscrimination policies with strong and effective enforcement. **As** a result, the **BOCs** have been free to commit numerous anticompetitive acts against independent ISPs. primarily by denying **ISPs** equal access to DSL networks.²⁴ Despite complaints filed by **ISPs** in various regulatory **fora** – including the FCC – it appears that very little has been done to date to enforce the <u>Computer Inquiry</u> rules in the DSL realm."

Under these circumstances, it is not surprising that the BOCs have used their monopoly positions to quickly seize a disproportionate share of the retail ISP business

1211 Connecticut Avange, NW | Suite 808 | Washington, IC 20098 |p: 202.496.1000 | 1 202.496.1300 | www.breadnetalliance.org

110601B (ISP alleges discrimination by Qwest Communications in providing DSL services).

²³ Patricia Fusco, "Top U.S. ISPs by Subscriber: Analysis of 2001 Year End Reports," <u>ISP-Planet</u>, February 11, 2002; Patricia Fusco, 'Top U.S. ISPs by Subscriber,' <u>ISP Planet</u>, February 11,2002.

²⁴ See, e.g., http://www.cybertelecom.org/ci/enforcem.htm (Site includes links to articles and filings related to the issue of ISP discrimination).

²⁵ See, e.g., Verified Complaint of the California ISP Association, Inc. Against Pacific Bell Telephone Co. (U-1001-C) and SBC Advanced Solutions, Inc. (U-6346-C) (http://www.cispa.org/244547.DOC) (ISPs challenge unlawful DSL contract terms); FCC Complaint of Earthlink against SBC (Nov. 5,2001). available at http://www.brandx.net/fcc/earthlink-complaint/Part%201.pdf (Earthlink challenges unlawful DSL tariff); Hearing before the Florida Public Service Commission at http://www.floridapsc.com/psc/dockets/index.cfm?event=displayFile&Link=01895%2D01%2Epdf (Independent ISPs allege ILEC discrimination); In the Matter of SBC Communications, Inc., Notice of Apparent Liability for Forfeiture, File No. BB-01-IH-0642, NAL/Acct. No. 200232080001 (Nov. 1, 2001), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-01-2549A1.doc. (Enforcement Bureau investigates SBC discrimination against unaffiliated ISPs in provisioning and maintaining DSL; AISPA Letter to FCC Enforcement Bureau http://www.aispa.org/1031/wrapper.jsp?PID=1031-10&CID=1031-



that depends on DSL connections. Coupled with the fact that broadband ISP growth is roughly three times that of narrowband ISP growth, 26 the ILECs' market dominance raise **serious** concerns about the future of the independent ISP industry, and the Internet generally. It simply cannot be in the public interest for policymakers to stand by and do nothing while the ILECs, via their fully-integrated broadband ISPs, extend their local telephone monopolies to the very heart of the Internet.

At this critical juncture in the evolution of the Internet towards the use of broadband connections, the FCC's refusal to adequately enforce its own rules to protect consumers and ISPs alike from a burgeoning BOC monopoly certainly is deeply troubling. An even greater cause for alarm, however, is the FCC's new proposal to eliminate the very nondiscriminatory access policies that helped pave Ihc way for the Internet in the first place.²⁷ The BroadNet Alliance believes that the right policy answer in the broadband DSL world is the same right answer that has been demonstrated so convincingly in the narrowband "dial-up" world: the FCC must retain and enforce the existing nondiscrimination requirements contained in its Computer Inquiry rules. Only when ISPs have equal access to DSL-based telecommunications connections will all U.S. consumers have a genuine choice for a diversity of broadband content, services, and applications.

Patricia Fusco. 'Top U.S. ISPs by Subscriber," <u>ISP Planet</u>, November 2, 2001.
 In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, CC Docket No. 02-33, Notice of Proposed Rulemaking, FCC 02-442, released February 15,2002.



For Further Reading:

ARTICLES

ISPs Diversify Services to Meet Demand (4/12/02)

http://isp-planet.com/research/2002/evolution.html

Independent ISPs are not going to sit back while larger rivals comer the market on new services. a report by INT Media Research finds. In the wild west of Wi-Fi and satellite services, the humble antenna is the competitive equalizer.

ISPs Are Nuts (And Bolts) Of Any Broadband Future (3/14/02)

http://isp-planet.com/business/2002/bolts.html

Internet service providers (ISPs) now know that corporate **America** hopes that broadband Internet services will bring the **economy** back to boom, but corporate plans ignore small ISP businesses, threatening the whole enterprise.

VoIP New Briefs

http://isp-planet.com/technology/2002/voip briefs 020610.html

ISP competition is driving these types of advancements.

SBC Unfair on High-Specd Net, ISPs charge

By John Borland

Staff Writer, CNET News.com

July 26,2001, 3:30 PM PT

HTTP://NEWS.COM.COM/2100-1033-270673.HTML?LEGACY=CNET&TAG=CD_MH

SBC DELAYS PROMPT DSL SUSPENSION

BY JIM WAGNER

AUGUST 3,2000

HTTP://WWW.INTERNETNEWS.COM/ISP-NEWS/ARTICLE, PHP/8 429251

Kentucky **PSC:** BellSouth Provided Discriminatory Access

By Carol King

December 6,2000

http://www.internetnews.com/isp-news/article.php/8 527761

BellSouth told to fix DSL fees: State backs IgLou's claim that pricing thwarts

competition

By Richard Des Ruisseaux, The Courier-Journal

Dec. 6.2000

http://www.courier-journal.com/business/news/001206bell.html

 ${\bf lSPs}$ allege Bell abuse in high-speed services

By John Borland



Staff Writer, CNET News.com October 27, 1999 http://news.com.com/2100-1040-232021.html

Local Baby Bells blamed for broadband blues

By Mark Leon December 19,2001 12:44 pm PT http://www.infoworld.com/articles/hn/xml/01/12/19/01 121 9hnbabybells.xml

ISP Competition Fuels Stronger Service Level Agreements (SLAs) (1/17/00) http://www.nwfusion.com/news/2000/0117carrier.html Competition provides choices that help ensure reliability.

Sources:

A quick list of some of the thousands of ISPs available to consumers can be found at http://thelist.internet.com/index.html

- http://www.mbcnet.org/archives/etv/V/htmlV/videotext/videotext.htm
- http://www.isoc.ore/intemet/historyi
- http://www.pbs.org/internet/timeline/index.html
- http://www.ubs.org/opb/nerds2.0.1/networkineerds/atwork.html
- Apple II History http://apple2history.org/history/ah22.html
- http://www.tidbits.com/iskm/iskw2html/pt3/ch09/ch09a1.html#aa3
- http://www.mbcnet.org/archives/etv/T/htmlT/telcos/telcos.htm
- Jack Egan, Online Goes Big Time: The Commercial Services Are Beating the Web by Joining It, US NEWS & WORLD REP., Nov. 20, 1995, at 104.
- http://keithlynch.net/timeline.html